

REMARKS

Claims 1-6, 9-28, 31-35 and 38-43 are pending in this application. By this amendment, Applicants have added new dependent claims 46-53.

Reconsideration of the above-identified application in view of the foregoing amendments and the following remarks is respectfully requested.

Completeness of Office Action mailed March 6, 2007:

The Office Action mailed on March 6, 2007 did not address Applicant's new claims 44 and 45, which were added in the Amendment filed on January 24, 2007. Those claims were not acknowledged either in the Office Action Summary (PTOL-326) or in the body of the Office Action. In the event that the Examiner does not allow the instant application in view of this response, Applicants respectfully request that claims 44 and 45 be addressed on the merits in the next Office Action. That Office Action should not be made "final" given that those claims were not previously addressed by the Office.

Amendments to the Specification:

Applicants have amended the specification to reiterate that the problems in the known teachings are overcome by the representative embodiments of the present invention. No new matter has been added.

Rejections Under 35 U.S.C. §103:

Claims 1-3, 9-12, 18-25, 31-34 and 38-43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,999,721 to Ollis et al. ("Ollis") in view of U.S. Patent No. 7,046,649 to Awater et al. ("Awater") and U.S. Patent No. 6,934,558 to Sainton et al. ("Sainton").

Claims 4-6, 13-17, 26-28 and 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ollis, Awater and Sainton in view of alleged “applicant admitted prior art”.

Claims 1, 10, 20, 23 and 32 are drafted in independent form.

Applicants’ invention, as defined by amended claim 1 is directed to a system for integrating a plurality of short-range communication protocols, the system comprising:

a signaling protocol for enabling an enhanced host controller to share use of an RF transceiver between a plurality of communication modules using a plurality of short-range communications protocols,

wherein the signaling protocol comprises,

a first parameter, which indicates currently enabled ones of the communication modules of the plurality of communication modules to which a host command may be directed, and a second parameter, which indicates a priority order for sending the host command to each of the enabled ones of the communication modules indicated by the first parameter.

Claim 1 requires “a second parameter, which indicates a priority order for sending the host command to each of the enabled ones of the communication modules indicated by the first parameter.” In one exemplary embodiment, if the Bluetooth, LEE MAC and RFID stacks are all enabled, the priority order of the second parameter may indicate sending the host command to the RFID stack first, the LEE MAC stack second and the Bluetooth stack last. (See, e.g., Specification, p. 25, paragraph 52, lines 5-8) Hence, the second parameter indicates a priority order for sending the command to each of the communication modules indicated by the first parameter as being enabled. The Office Action apparently relies on Sainton for this feature. In particular, the Office Action provides:

“Combination of Ollis and Awater doesn’t expressly teach that a priority order for send the host command is part of signal protocol.

Sainton teaches that a user could select his/her desired communication module based on setting by the user. In other word, based on the availability of wireless protocols, the device would pick one over the other based on the user's desires (see column 2, lines 44-56)." Office Action, pp. 3-4

The passage of Sainton that the Office Action relies upon for the above-identified claim feature recites:

"Another more specific object of the subject invention in the provision of a product which would be capable of utilizing any one of the wireless data services within a given geographic area based on a user determined criteria such as: (1) the cost of sending a data message, (2) the quality of transmission link (signal strength, interference actual or potential), (3) the potential for being dropped from the system (is service provider at near full capacity), (4) the security of transmission, (5) any special criteria which the user could variably program from his omni-modal wireless product based on the user's desires or (6) any one or more combinations of the above features that are preprogrammed, changed or overridden by the user." (Sainton, col. 2, lines 44-56)

However, selecting one of a plurality of wireless data services based on user determined criteria, as described in the foregoing passage of Sainton, does not teach or suggest "a second parameter, which indicates a priority order for sending the host command to each of the enabled ones of the communication modules indicated by the first parameter", as required by claim 1. In that regard, Sainton is similar to Ollis. The system disclosed in Ollis simply selects one of a plurality of wireless transfer mechanisms to use to connect to a destination wireless computing device or uses multiple wireless transfer mechanisms to redundantly transmit the same information to the same destination wireless computing device. (See, e.g., Ollis, col. 7/lines 31-46) Moreover, Awater does not teach or suggest the foregoing feature of claim 1, nor was it relied upon in the Office for this feature, but instead, was cited merely to show a plurality of communication modules sharing one RF transceiver.

Accordingly, Applicants respectfully submit that claim 1 is allowable over the combination of Ollis, Awater and Sainton.

Claims 10, 20, 23 and 32 contain features similar to those found in amended claim 1, and thus, are allowable for at least the same reasons.

Dependent Claims:

In the Amendment dated January 24, 2007, Applicants added new dependent claims 44 and 45. As previously indicated, however, those claims were not addressed in the March 6, 2007 Office Action.

Claim 44 recites “[t]he system of claim 1, wherein the host command is received from a Bluetooth host.” Support for this claim may be found, e.g., in FIG. 2 of the instant application.

Claim 45 recites “[t]he system, of claim 1, wherein the currently enabled ones of the communication modules include each of a Bluetooth, a LEE MAC and an RFID communication module and the priority order of the second parameter indicates, sending the host command to the RFID communication module prior to sending the command to either the LEE MAC communication module or the Bluetooth communication module, and sending the host command to the LEE MAC communication module prior to sending the command to the Bluetooth communication module. Support for this claim may be found, e.g., on page 25, paragraph 52, lines 5-8 of the instant application. For the reasons stated in paragraph 52, this order is believed to be very efficient.

The foregoing dependent claims 44 and 45 recite features believed to be patentable over the prior art of record.

By the present Amendment, Applicants have added new dependent claims 46-53.

Claim 46 recites “[t]he system of claim 1, wherein the enhanced host controller is configured to modify the host command to one or more commands suitable for use by one or more of the communication modules indicated by the first parameter based on the priority order indicated by the second parameter.” Claims 47 and 51-53 are each directed to similar features.

Claim 48 recites “[t]he communication device of claim 10, wherein for each communication module indicated as currently enabled by the first parameter, the enhanced host controller, prior to sending the host command to a respective one of the enabled communication modules in accordance with the priority order indicated by the second parameter, modifies the host command to a command suitable for use by the respective one of the communication modules, if the host command otherwise is unsuitable for use by the respective one of the communication modules.”

Claim 49 recites “[t]he communication device of claim 48, wherein the host command is a Bluetooth command and the enhanced host controller modifies the Bluetooth command to at least one of an RFID command and a LEE MAC command that satisfies the Bluetooth command for use by a currently enabled RFID communication module and a LEE MAC communication module, respectively.”

Claim 50 recites “[t]he communication device of claim 48, wherein the host command is unsuitable for use by any of the communication modules indicated by the first parameter as currently enabled.”

Support for these new dependent claims may be found, e.g., at least on page 24, lines 4-5, page 25, lines 20-21, page 26, lines 1-2 and 17-21, page 28, lines 1-5 and 14-16, page 28, line 23 to page 29, line 5 and page 29, lines 15-17. For example, in one embodiment, in response to a single host command, which may be, e.g., a Bluetooth command for connection

establishment, that command may be modified by the enhanced host controller into a form suitable for the highest priority module indicated by the second parameter, which may be, for example, an RFID module. If connection establishment does not occur with the RFID module, the host command, modified to a form suitable for the next highest priority module indicated by the second parameter, which may be, for example, a LEE MAC module, is sent to the LEE MAC module. If connection establishment still does not occur, the host command, which, in this exemplary embodiment, is a Bluetooth command, may be sent to a Bluetooth module for connection establishment.

The foregoing dependent claims 46-53 recite features believed to be patentable over the prior art of record.

Applicants do not believe it necessary at this time to further address the rejections of the dependent claims as Applicants believe that the foregoing places the independent claims in condition for allowance. Applicants, however, reserve the right to address those rejections in the future should such a response be deemed necessary and appropriate.

CONCLUSION

Applicants respectfully submit that this Application is in condition for allowance for which action is earnestly solicited.

If a telephone conference would facilitate prosecution of this Application in any way, the Examiner is invited to contact the undersigned at the number provided.

AUTHORIZATION

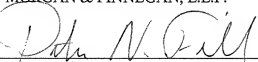
The Commissioner is hereby authorized to charge any additional fees which may be required by this response, or credit any overpayment to Deposit Account No. 13-4500, Order No. 4208-4136.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 4208-4136.

Respectfully submitted,
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